**QOTW: Black Hole Sun**

A black hole is not a hole at all, but a star (like our sun) that is so massive that the crushing force of gravity sucks everything into itself – even light cannot escape, which is why it is “black”. Apparently the sun, whose light escapes easily (since it is bright and yellow) is too small in mass and too large in radius to become a black hole. However, if somehow we could squeeze all the mass of the sun into a smaller radius, it could then become a black hole.

Given the mass of the sun, find the critical radius at which light would not be able to escape the surface of the sun, making it a black hole. Use the internet to find any numbers you need to answer this.